TWO NEW SPECIES OF ELEODES FROM UTAH
(Coleoptera: Tenebrionidæ)

BY FRANK E. BLAISDELL, SR.
Stanford Medical School and California Academy of Sciences
San Francisco, California

The physical features of the State of Utah are greatly diversified, presenting high mountains, broad arid valleys and desert plateaus. The fauna and flora present variety corresponding with that of the topography. The coleopterous fauna is particularly interesting and at times unique. Prof. Vasco M. Tanner, head of the Department of Zoölogy of the Brigham Young University, has from time to time made biological expeditions to different parts of the State, and it is due to this research that the author is enabled at the present time to describe the two interesting species of *Eleodes* given below:

Eleodes tanneri Blaisdell, n. sp.

Form ovate to subovate, robust, twice as long as wide, elytra asperately sculptured. Color black, luster opaque.

Head about as long as wide, scarcely as wide as the pronotal apex, canthi not more prominent than the eyes; sides moderately convergent anteriorly, rather strongly arcuate over the antennal insertions, slightly emarginate at the oblique sutures, thence straight to the epistomal apex, the latter sinuato-truncate with angles obtusely rounded; frons nearly plane, being slightly irregularly convex, densely irregularly and quite coarsely punctate, frontal suture obsolete or a mere line. Labrum transverse, arcuate at apex, with a small abrupt emargination at middle, coarsely and densely punctate, laterally with rather long, rigid, anteriorly directed setæ. Antennæ long, extending beyond the pronotal base, not incrassate, third joint twice as long as the fourth, second short and about as long as wide; fourth a little longer than the fifth, the latter to the eighth inclusive quite equal in length and width, eighth subtriangular, ninth and tenth oval and slightly transverse, eleventh ovate and truncate at apex, slightly wider than long.

Pronotum a fourth to a third wider than long, apex transverse in feeble circular arc, angles obtuse and not in the least prominent; sides rather strongly arcuate in anterior three-fourths, thence moderately sinuate, becoming parallel before the subrectangular basal angles; base transverse, slightly wider than the apex, often feebly truncato-sinuate before the scutellum; disk moderately convex, most so transversely, densely and moderately strongly punctate, the punctures becoming very dense laterally.

Elytra oval, truncate at base, a fifth to a sixth wider than long, a little more than twice the length of the pronotum; humeral angles distinct and obtuse; sides moderately arcuate, gradually converging in about apical fourth, apex rather narrowly rounded; disk moderately convex, strongly and arcuately deflexed laterally, apical declivity arcuately and rather abruptly declivous; surface very densely and scabrously tuberculo-submuricate, tubercles small and obliquely directed, punctures very small at tip of the tubercles, each giving origin to a very short, stout seta; there is distinct evidence of a lineal arrangement when viewed longitudinally.

Undersurface of the body somewhat shining, densely and more or less rugoso-punctate. Abdominal segments differ in length in the sexes. Legs moderate in stoutness, somewhat relatively long, especially the middle and posterior; metatarsi about five-tenths of their length shorter than their metatibia.

Male. Narrower and subovate. Pronotum subquadrate, about a fourth wider than long. Elytra widest at middle. Abdomen horizontal, moderately convex, rather broadly impressed in middle third of first two segments; third and fourth segments subequal, fifth as long as the combined length of third and fourth; second a little longer than the postcoxal part of the first. Protibial spurs very unequal in size, the anterior or inner rather stout, gradually narrowed to apex and about twice as long as the posterior.

Female. Ovate and robust. Pronotum transverse, about a third wider than long; elytra more inflated. Abdomen rather strongly convex; third segment quite equal in length to the fifth and twice as long as the fourth, second equal to the postcoxal part of the first. Anterior protibial spurs unusually short and broad, in the holotype about as wide as long, the posterior short.

Measurements: (Types) Length 14-16 mm.; width 6-7.5 mm.

Holotype, female, No. 2956, and allotype, male, No. 2957, in the author's collection, Museum of the California Academy of Sciences. Collected by Prof. Vasco M. Tanner and Anson Call, Jr. I take pleasure in dedicating the species to Professor Tanner, who possesses two paratypes.

Type locality: Holotype and allotype were collected at Elk Ridge, Bears Ears, San Juan County, Utah. Two paratypes in Professor Tanner's collection were taken on Mount Tukuhnikivats, La Sal Mountains, San Juan County, Utah. Other specimens from Blanding, San Juan County, and Moab, Grand County, Utah. Twelve specimens are in Professor Tanner's collection.

Tanneri belongs to the subgenus Melaneleodes and to the Quadricollis Section, as indicated by the very stout anterior protibial spurs of the female and should precede *rileyi* Casey

in our lists. *Rileyi* is robust and much shorter than either *quadricollis* Esch. or *humeralis* Lec.; the anterior protibial spurs of the female are unusually long, parallel and moderate-arcuate. In *tanneri* the anterior protibial spurs of the female are broad and about as wide as long; this extreme form may be due to wear, both anterior spurs are exactly alike. The elytral sculpturing in *rileyi* is quite smooth, while the elytra in *tanneri* are moderately roughly sculptured.

Eleodes strumosa Blaisdell, n. sp.

Form ovate, somewhat robust, about twice as long as wide. Color black, fifth abdominal segment more or less rufous in the types; surface alutaceous with luster distinctly dull. Pubescence nearly recumbent, very inconspicuous and setigerous in character.

Head about as long as wide, equal in width to the pronotal apex, canthi not more prominent than the eyes, the latter moderately convex; sides convergent anteriorly, evenly arcuate over the antennal insertions, slightly emarginate at the oblique sutures, thence straight to the well rounded epistomal angles; epistoma broadly and arcuately sinuate at apex; frons very slightly convex, broadly and feebly impressed along the position of the frontal suture as well as within the supra-antennal convexities, sutures obsolete; densely and rather coarsely punctate, punctures much smaller and denser in the occipital region, a small impunctate area at middle near the vertex. Labrum transverse, apex and sides arcuate, the former with a small quadrate emargination at middle; densely punctate, punctures finer and sparser toward base, each with a rigid, rather long and anteriorly directed seta. Antennæ slender, not incrassate, extending beyond the pronotal base; second joint slightly longer than wide, third elongate and about one-sixth of its length shorter than the combined lengths of joints four and five; fourth and fifth equal in length, each a little longer than the sixth; joints six to nine inclusive quite equal in length, eighth subtriangular, ninth triangulo-oval, tenth circular to slightly oval; eleventh ovate, a little longer than wide and obliquely truncate at apex.

Pronotum about one-fourth to one-third wider than long; apex broadly and slightly sinuate in feeble circular arc, angles well rounded and not in the least prominent anteriorly; sides rather strongly and nearly evenly arcuate from apex to base, being slightly less arcuate near base, marginal bead very fine to almost obsolete; base subtruncate in feeble circular arc, one-sixth wider than the apex, angles obtuse-angular; disk evenly and strongly convex, densely and coarsely punctate, punctures somewhat pit-like, each with a rigid recumbent black seta.

Elytra about one-fourth longer than wide, base transverse and scarcely wider than the pronotal base; humeri broadly rounded, continuously so with the moderately strongly arcuate sides, apex broadly rounded when viewed from above, but somewhat ogival when seen obliquely from behind; disk strongly convex, slightly less so in the central area, arcuately and very abruptly declivous apically; densely and evenly punctate, punctures coarse, the surface immediately adjacent to them anteriorly, slightly raised, smooth and shining; each puncture with a recumbent inconspicuous black seta. Scutellum small and triangular.

Undersurface of the body densely punctate, propleuræ tuberculose, tubercles small, round and polished; prosternum punctato-tuberculate. Abdomen more or less rugose; fifth segment more or less rufous. Legs of moderate length and rather slender; tarsi slender, the metatarsi about three-fifths as long as their tibia. Tibial spurs small in both sexes.

Male. Narrower, relatively less robust and longer. Abdomen noticeably oblique to the sterna, less than moderately convex, broadly and rather strongly impressed in middle third of first three segments. Protibial spurs moderately small, the anterior about a third longer than the posterior. First joint of the protarsi densely clothed beneath with golden pubescence; second joint with a small cylindrical tuft at tip beneath blocking the plantar groove. First joint of the mesotarsi with a similar small and prominent tuft at apex beneath, also blocking the plantar groove. Fifth abdominal segment equal in length to the third and fourth taken together; second equal to the postcoxal part of the first; third slightly shorter than the second, fourth not quite as long as the third.

Female. Moderately robust. Abdomen strongly convex and horizontal; second segment equal to the postcoxal part of the first; fifth about one-seventh longer than the second and twice as long as the fourth; third one-third longer than the fourth. Tarsi without pubescent tufts beneath, plantar grooves entire between the tufts of apical spinules.

Measurements: (Types) Length 12-13 mm.; width 5.5-7 mm.

Holotype, female, No. 2958, and allotype, male, No. 2959, in the author's collection, Museum of the California Academy of Sciences. Collected by Prof. Vasco M. Tanner, who possesses three paratypes.

Type locality: Holotype is from the Deep Creek Mountains, Tooele County, Utah, and the allotype is from Lehman Cave, Mount Wheeler, White Pine County, Nevada. The three paratypes are from the Deep Creek Mountains, Tooele County, Utah. Four other specimens in Professor Tanner's collection are from the same region as the paratypes. Mount Wheeler,

Nevada, is approximately seventy-five miles southwest of the Deep Creek Mountains.

Strumosa belongs to the subgenus Blapylis and should precede *caseyi* Blais. in our lists, from which it differs by its strongly convex pronotum and elytra, in this character resembling *neotomæ* Blais. In *caseyi* the pronotal sides are feebly sinuate in basal eighth and not noticeably constricted, and besides the pubescence is more conspicuous, its facies is somewhat *Amphidora*-like, and its color and pubescence reminds one of *Stenotrichus* Lec. In *strumosa* the pronotal sides are arcuate from apex to base. From other related species it differs by its even and equal subasperate and rather weak sculpturing.

Change of names:

Eleodes paradoxa n. n. This new specific name is proposed to take the place of *montanus* Blais., which is preoccupied for a Mexican species. **Eleodes patulicollis** n. n. for *dilaticollis* Blais., a name that has been used by Champion for a Mexican species, and therefore is preoccupied.

Note on Pacific Coast Sphæridiinæ

In addition to the species listed from the Pacific Coast by Blackwelder (Pan-Pac. Ent., VIII, 1931, pp. 19-32), I have in my collection from Washington *Sphæridium bipustulatum* F. (Seattle, 1928) and *Cryptopleurum minutum* F. (Seattle and Vashon Island).

Washington localities may likewise be cited for the following species, extending their ranges as indicated by Mr. Blackwelder's paper: *Sphæridium scarabæoides* L. (Chehalis, 1913; Seattle, 1914; Chewelah, Blue Mountains, and Lake McElroy, M. C. Lane). *Cercyon marinus* Thomson (Sprague, M. C. Lane), *C. lateralis* Marsh. (Seattle), *C. hæmorrhoidalis* F. (Seattle), *C. pygmæus* Ill. (Evans Creek, King County), (Vashon Island), *C. opacellus* Fall (Seattle), *Megasternum posticatum* Mann. (Chehalis, Loveland, Vashon Island). Also I have *C. quisquilius* L. from Terrace, B. C., collected by Mrs. W. W. Hippisley and received through Mr. Frost.—Melville H. Hatch.